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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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091220.656 05/28/99 FUGLEVAND P.E.

W WA23-015

021567 IM22/0501
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EXAMINER

KALAFUT, S.

ART UNIT

PAPER NUMBER

1745

DATE MAILED:

05/01/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No. 09/322666	Applicant(s) FUGELVAND ET AL
Examiner KALAYET	Group Art Unit 1745

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on 9/22/00, 1/2/01, 3/27/01.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-7, 9-34, 37-53, 56-70, 73-115, 117-244, 246-310 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☒ Claim(s) 1-7, 9-34, 37-53, 56-59, 68-70, 73-115, 117-158, 168-190, 200-244, 246-310 is/are allowed.
- ☒ Claim(s) 59, 61, 62, 65, 67, 159, 161, 162, 164-167, 191, 193, 199, 198 is/are rejected.
- ☒ Claim(s) 60, 63, 64, 66, 160, 163, 192, 195-197, 199 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4, 7, 8
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

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1. Claims 159, 161, 162 and 164-167 are rejected under 35 U.S.C. 102(b) as being anticipated by Sonntag *et al.* (US 5,780,981).

Sonntag *et al.* disclose a method of controlling a fuel cell, which may include a stack of PEM cells (column 2, lines 22-36), using a controller (12) which periodically opens a purge valve (14). This would bleed a connection (13) to the fuel cell. This removes contaminants (presently called "diluent") from the hydrogen gas (column 2, lines 50-53). While terminals are not specifically mentioned, a fuel cell stack would by definition include them.

2. Claims 59, 61, 62, 65, 67, 191, 193, 194 and 198 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tajima *et al.* (US 5,334,463).

Tajima *et al.* disclose a fuel cell system comprising a fuel cell (4) connected to a DC/DC converter, which would indicate that the fuel cell has terminals, where the fuel cell is controlled by a control device (6), which monitors the operation of the fuel cell via a current meter (7). Tajima *et al.* does not mention the source of power for the control device. However, since the device itself is electrical, it would need a supply of power. Since batteries are well known as a source of electrical power, it would be obvious to supply power to the control device of Tajima *et al.* from a battery, during the operation of the fuel cell. The use of a plurality of fuel cells in a stack, as well as the polymer electrolyte type of fuel cell, are conventional in the art.

3. Claims 60, 63, 64, 66, 160, 163, 192, 195-197 and 199 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The plurality of distributed controllers, the selective deactivation of a fuel cell within a plurality thereof, and the control system monitoring and charging the same battery from which the control device obtains its power, are neither disclosed by Sonntag *et al.* or Tajima *et al.*, nor seen as obvious modifications thereto.

4. Claims 25-31, 80-87, 98-109, 217-240 and 259-262, for reasons of record, are allowed.

5. Claims 1-7, 9-24, 32-34, 37-41, 44-53, 56-58, 68-70, 73-79, 88-97, 110-115, 117-158, 168-190, 200-216, 241-244, 246-258, and 263-310 are allowed. These claims contain subject matter which has been indicated as allowable in the last office action (paragraph 20) or is considered allowable for reasons pointed out by applicants.

6. Applicant's arguments with respect to claims 59-67, 159-167 and 191-198 have been considered but are moot in view of the new ground(s) of rejection.

Claims 59 and 191 as amended recite that the fuel cell rather than the battery is being controlled, thus necessitating the new grounds of rejection over Tajima *et al.* Claim 159 as amended recites the bleeding of matter from a fuel cell, thus necessitating the new grounds of rejection over Sonntag *et al.*


7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Steve Kalafut whose telephone number is (703) 308-0433. His supervisor, Gabrielle Brouillette, may be reached at (703) 308-0756. The Technology Center receptionist may be reached at (703) 308-0661.


STEPHEN KALAFUT
PRIMARY EXAMINER
GROUP 1700

sjk

May 1, 2001